INTRODUCTION TO

NXDN AMATEUR RADIO

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WHAT IS NXDN?

It is a COMMON AIR INTERFACE (CAI), a technical protocol that defines a digital voice and data radio system

Technical Specification managed by NXDN Forum

Emission Designators: 4K00F1E, 4K00F9W, 8K00F1E, 8K00F9W

Type of Modulation **FDMA**

Channel Bandwidth **6.25 KHz & 12.5 KHz**

Signaling **4 FSK**

Speed: **4800 Baud for 6.25 KHz & 9600 baud for 12.5 KHz**

HOW LONG HAS NXDN BEEN AROUND?

Created in 2005 by ICOM and Kenwood to FCC 2004 Narrowbanding R&O

Only true 6.25 KHz Radio Protocol

THREE FLAVORS OF NXDN

CONVENTIONAL MODE

TYPE C TRUNKING (uses Control Channel)

TYPE D TRUNKING (Distributed Control Model)

COTRAST AND COMPARE

Analog

VHF and UHF

25 KHz Channel

CTCSS or PL

One size fits all

NXDN Digital

- VHF and UHF
- 6.25 KHz Channel
- RAN Code (64)
- TalkGroups
- Individual Calling
- Every radio has an ID

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COTRAST AND COMPARE

Analog

- Simplex Ops
- Repeater Ops

NXDN Digital

- Simplex Ops @ 6.25 KHz
- Repeater Ops
- Easy to Network
- NXDN Simulcast
- Superior Weak Signal operations

SO, WHAT ABOUT COVERAGE?

When ERP, Antenna Height and Terrain are equivalent …

NXDN *outperforms* 25 KHz Analog by up to **Fifteen Percent.**

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NXDN Radios
Decode The Digital Stream Down To
-116 dBm

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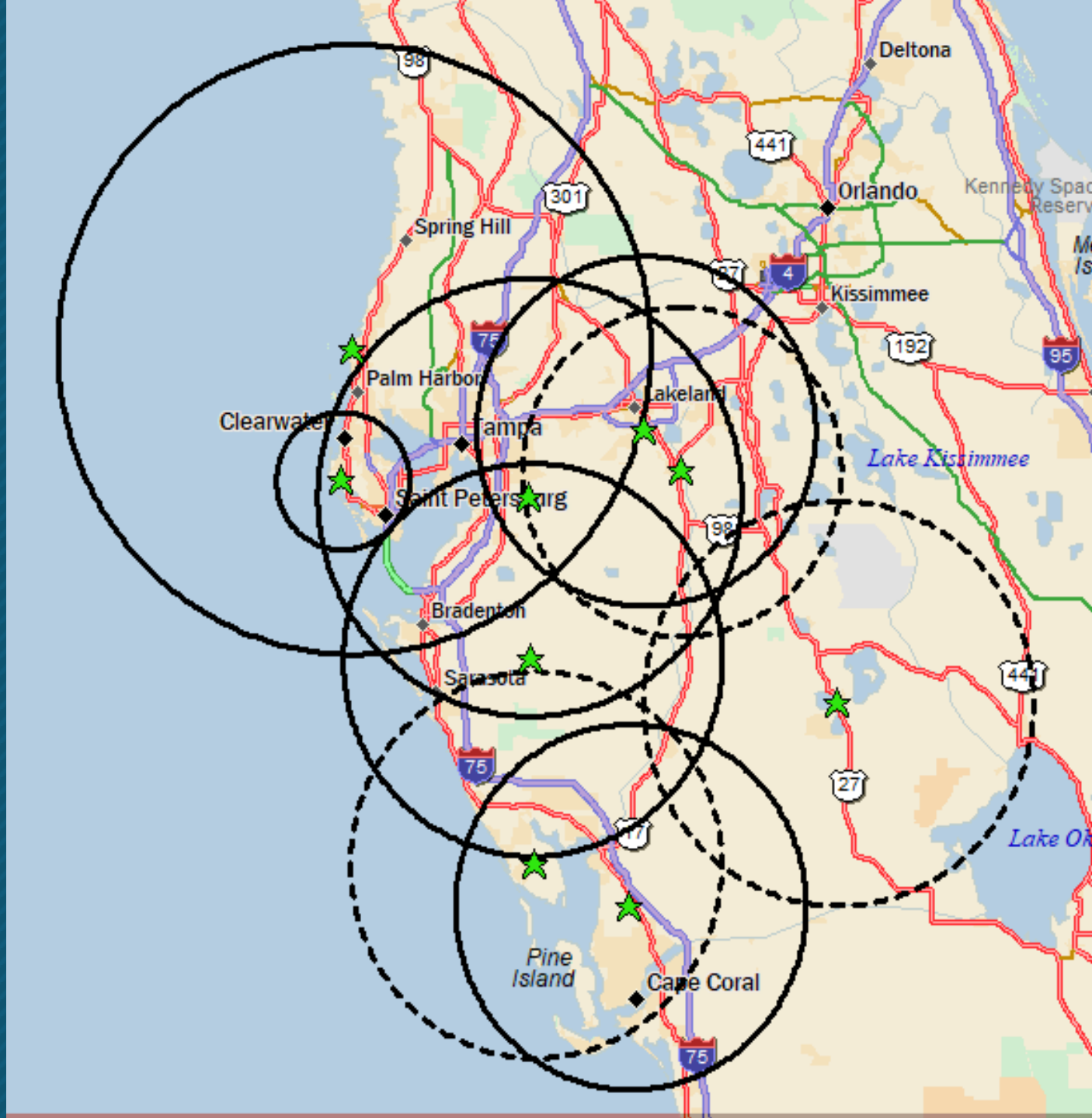
The West Central Florida Group, Inc. (NI4CE)
Put NXDN on the air in 2007!

NXDN REPEATERS IN WEST CENTRAL FLORIDA

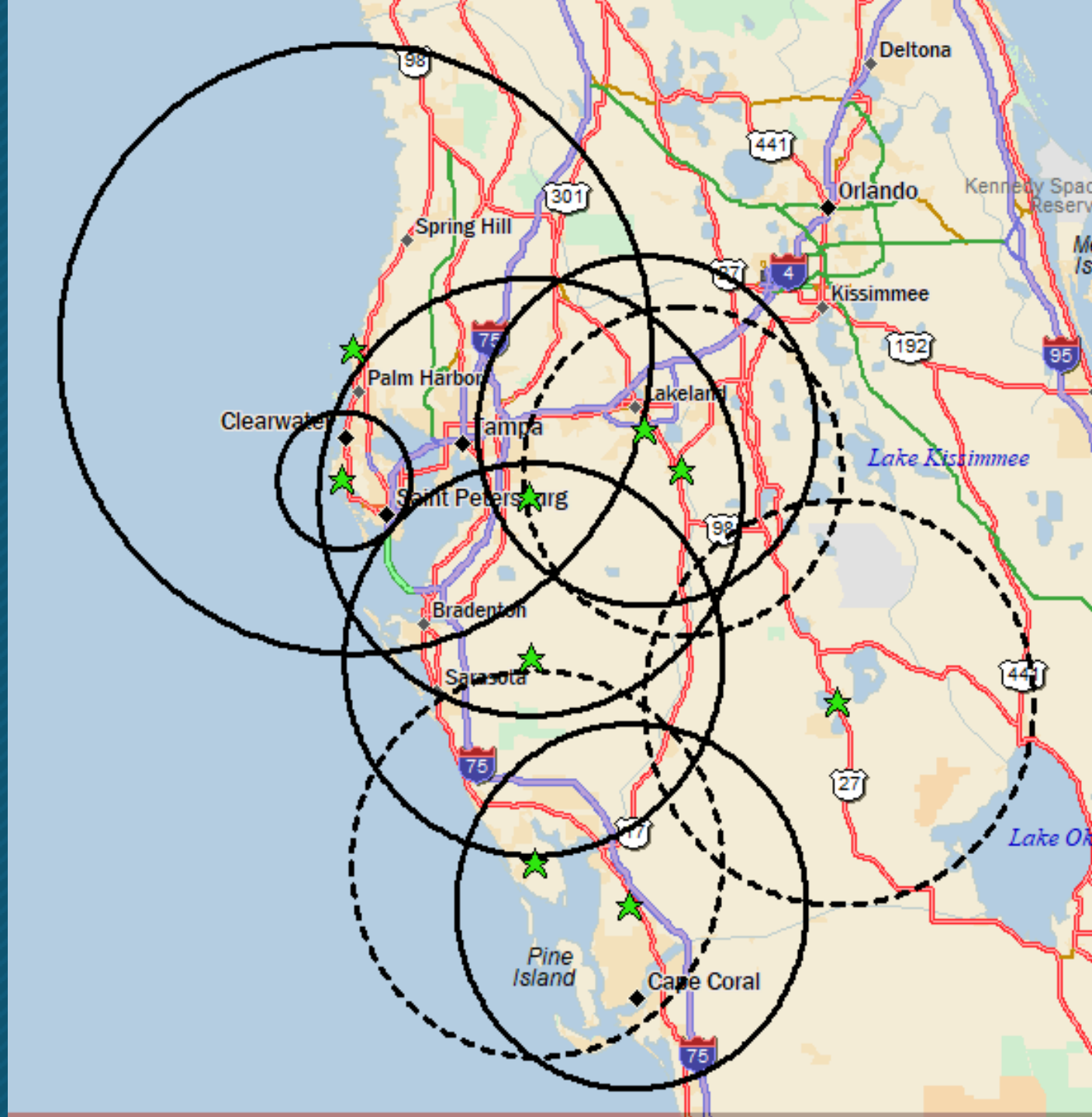
- PASCO 442.6500
- BOYETTE 442.0875
- LAKELAND 444.6625
- SEMINOLE 442.1500
- VERNA 444.3125
- CHARLOTTE1 442.0625
- CHARLOTTE2 Proposed
- BARTOW 442.1375
- LAKE PLACID 442,1125

Ni4ce.org

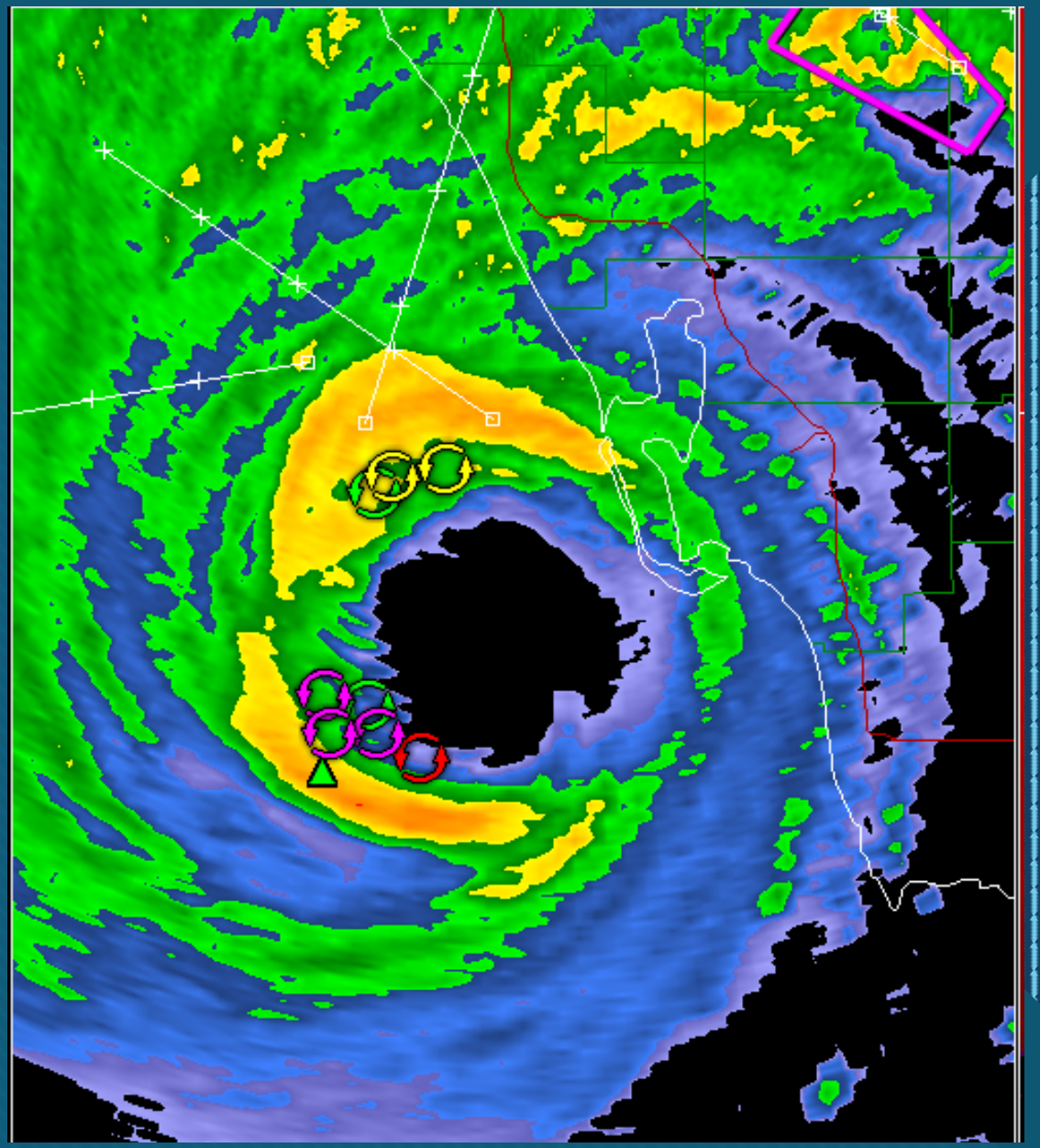


WEST CENTRAL FLORIDA TALKGROUPS

- 1 LOCAL
- 1200 FLORIDA
- 1201 WCF SECTION
- 1230 TACTICAL-1
- 1231 TACTICAL-2
- 1232 TACTICAL-3
- 1233 TACTICAL-4
- 1299 SKYWARN



HURRICANES IAN - NICOLE & NXDN



HOTSPOTS

NXDN RADIOS

NXDN is a LAND MOBILE RADIO Product Line

KENWOOD

NX Series Portables and Mobiles

NX-5700

NX-5300
NX-5400

Ff62D 11

F2100DTL

F4400DS 11

F6400D 01

INTRODUCING

F6130D

ICOM

INTRODUCING THE

ICOM F6130D NXDN MOBILE

- 5/25/45 WATTS
- 8 ZONES
- 128 MEMORY CHANNELS
- OTAA & RX GROUP
- MESSAGING
- CALL ALERT
- CRYSTAL CLEAR VOICE

AVAILABLE MARCH, 2023

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ANTENNAS ARE IMPORTANT

MP Antenna 08-ANT-0864

- ¼ Wave UHF
- Multi-polarized design to improve Bit Error Rate (BER)
- Improve In-Building & Mobile Coverage

BASE STATION: 08-ANT-0891

AMATEUR RADIO OPERATIONS

CONVENTIONAL VOICE MODE

USE **RAN** or **SEL** Squelch

Announce Your **TalkGroup ID** When Calling

Newer Radios Support **O-T-A-A**

Register Your Callsign with **RADIOID.NET**

AMATEUR RADIO OPERATIONS

- Crisp Clear Communications
- Voice AF Response Tuned to the Human Ear
- Excellent Noise Cancelling
- No “Snap-Crackle-Pop”

Q & A

THANK YOU!

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